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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,994	09/10/2003	Anthony Tseng		4217

7590 02/17/2006  
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EXAMINER

WILKINS III, HARRY D

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/658,994	<b>Applicant(s)</b> TSENG ET AL.	
	<b>Examiner</b> Harry D. Wilkins, III	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 28-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 28-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over

· Applicant's admission of prior art in view of Eberle (US 5,215,211).

Applicant admits as prior art (see figures 1, 1A, 1B, 1C and paragraphs 2-6) housings for electrolyzers, which have panel at both ends, wherein a bracket was mounted on one end to mount the electrolyzer. The housing included four side walls, a roof and a floor.

The prior art electrolysis system was not adapted for "easily" detaching the electrolyzer from the remainder of the system. However, it has been held that making a portion of a system separable is well within ordinary skill in the art. See MPEP 2144.04. Applicant even states that it was known in the prior art that the electrolyzers had to be periodically replaced due to wear and tear. Thus, it would have been obvious to one of ordinary skill in the art to have modified the system to make the electrolyzer more easy to replace.

Thus, Applicant's admission of prior art does not teach (1) main and separate compartments for all of the components except the electrolyzer and the electrolyzer, respectively and (2) cell holder means for easily introducing and removing the

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electrolyzer including a track or a clip-on attachment into which the bracket on the electrolyzer was fitted.

Regarding limitation (1), it would have been obvious to one of ordinary skill in the art to have divided the prior art housing into separate compartments housing only the electrolyzer in one compartment and the remainder of the components in the other compartment because the electrolyzer was a source of major heat production and one of ordinary skill in the art would have been motivated to isolate the other components of the system from the heat produced by the electrolyzer. The wall dividing the housing into two compartments (i.e.-the wall common to both the separate compartment and main compartment) would have required openings to accommodate tubing and electrical connections from the electrolyzer to the other components in order for the electrolyzer to operate.

Regarding limitation (2), Eberle teach means for slidably supporting a device using "tracks" 36 for supporting an L-shaped bracket 32, wherein the bracket is easily introduced and removed from the U-shaped brackets 36.

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the L-shaped and U-shaped brackets of Eberle into the prior art electrolyzer housing system because the bracket system provided the advantage of securely supporting a device, while making the removal and replacement of the device easy.

Regarding claims 29 and 30, it would have been obvious to one of ordinary skill in the art to have arranged the L-shaped and U-shaped brackets in any desired orientation for detachably supporting the electrolyzer.

Regarding claim 31, it would have been obvious to one of ordinary skill in the art to have subdivided the main compartment into smaller compartments for isolating further portions of the electrolysis system.

Regarding claim 32, it would have been obvious to one of ordinary skill in the art to have made the fluid and electrical connections in the electrolysis system to be conventional quick connect fittings in order to facilitate disconnection and reconnection of the electrolyzer.

Regarding claim 33, the electrolyzer of Applicant's admission included a series of chambers.

Regarding claim 34, it would have been obvious to one of ordinary skill in the art to have made the separate compartment housing the electrolyzer to have a door which either pivoted at one side or slid aside to provide easy access to the electrolyzer when needed, but also provided a closed environment to prevent contamination during electrolysis operation.

Regarding claim 35, it would have been obvious to one of ordinary skill in the art to have made the electrolyzer and housing for a conventional, durable, strong and corrosion resistant material, such as metal or plastic.

Regarding claim 36, the electrolyzer of Applicant's admission was a process cell involving passage of electric current.

Regarding claims 37-42, see above regarding corresponding claims 29-32 and 34-35.

3. Claims 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art in view of Eberle (US 5,215,211) and Eki et al (US 5,846,390).

The teachings of Applicant's admission and Eberle are discussed above.

Applicant's admission and Eberle fail to teach a filter member in the electrolysis system.

Eki et al teach (see figure 4 and col. 5, line 65 to col. 6, line 16) a water electrolysis system which included a filtration stage for removing particulate matter and undesirable substances from the water before it is electrolyzed.

Therefore, it would have been obvious to one of ordinary skill in the art to have included a filter member as taught by Eki et al in the system of Applicant's admission and Eberle because the filter member removed harmful materials from the water to be electrolyzed. It would have been obvious to one of ordinary skill in the art to have placed the filter in its own compartment in the housing, and provided that compartment with a door, because the filter contained material (activated carbon cartridge and hollow-fiber membrane) which would have needed periodic replacement during operation.

Regarding claim 44, it would have been obvious to one of ordinary skill in the art to have made the housing fit together in any conventional manner, such as a snap tight fit.

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Regarding claim 45, see above with respect to claim 32.

Regarding claim 46, see above with respect to claim 31.

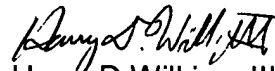
Regarding claim 47, see above with respect to claim 33.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Harry D Wilkins, III  
Examiner  
Art Unit 1742

hdw